

**Table 1A**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Hybrid Method)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor 95%/5%	Difference High-Median	Slope	
TRUE SIGMA 0.12 <span style="float:right">Slope 8.3</span>						
BEST CASE <sup>1</sup>	250 (199-314)	0.12 (0.09-0.185)	2.0	0.06	8.3	30+
10 at LD13, 45, & 70 <sup>2</sup>	250 (200-291)	0.13 (0.036-0.21)	5.8	0.08	7.6	30
7 at LD13, 45, & 70 <sup>3</sup>	250 (205-297)	0.15 (0.032-0.22)	6.2	0.07	6.7	21
5 at LD13, 45, & 70 <sup>4</sup>	250 (199-304)	0.12 (0.036-0.23)	6.4	0.11	8.3	15
10 at LD13 & 70; & 5 at 45 <sup>5</sup>	250 (192-304)	0.12 (0.036-0.21)	5.8	0.09	8.3	25
10 at LD13 & 45 <sup>6</sup>	250 (209-293)	0.129 (0.036-0.23)	6.3	0.10	7.8	20
10 at LD13 & 70 <sup>7</sup>	169 (169-203)	0.23 (0.23-30)				
10 at LD13, 40, & 87 <sup>8</sup>	291 (241-308)	0.211 (0.118-0.268)	2.3	0.075	4.7	30
10 at LD13, 40, & 87 <sup>9</sup>	291 (241-305)	0.18 (0.12-0.27)	2.3	0.09	4.7	30
7 at LD13, 40, & 87 <sup>10</sup>	296 (238-308)	0.2 ( 0.15+P54-0.28)	2.0	0.08	5.0	21
5 at LD13, 40, & 87 <sup>11</sup>	282 (230-307)	0.22 (0.17-0.29)	1.7	0.07	4.5	15
10 at LD13 & 87; & 5 at 40 <sup>12</sup>	282 (230-307)	0.22 (0.17-0.27)	1.6	0.05	4.5	20
10 atLD13 and LD87	NONE	CONVERGED				

<sup>1</sup> Only includes the 769 out of 1000 runs that converged

<sup>3</sup> Only includes the 1047 runs that converged

<sup>5</sup> Only includes the 929 runs that converged

<sup>7</sup> Only includes the 59 runs that converged

<sup>9</sup> Only includes the 584 runs that converged

<sup>11</sup> Only includes the 418 runs that converged

<sup>2</sup> Only includes the 1154 runs that converged

<sup>4</sup> Only includes the 884 runs that converged

<sup>6</sup> Only includes the 575 out of 1000 runs that converged

<sup>8</sup> Only includes the 315 out of 1000 runs that converged

<sup>10</sup> Only includes the 496 runs that converged

<sup>12</sup> Only includes the 428 runs that converged

**Table 1B**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Multiple UDP)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor 95%/5%	Difference High-Median	Slope	
(2000 simulations each unless specified in the footnote)						
TRUE SIGMA 0.12					Slope 8.3	
BEST CASE <sup>1</sup>	250 (199-314)	0.12 (0.09-0.185)	2.0	0.06	8.3	30+
Multiple UDP 6, 3 <sup>2</sup>	251 (207-312)	0.1 (0.035-0.21)	6.0	0.10	10	30
Multiple UDP 5, 3 <sup>3</sup>	250 (202-305)	0.12 (0.032-0.20)	6.25	0.08	8.3	25
Multiple UDP 4,3 <sup>4</sup>	247 (197-318)	0.119 (0.074-0.23)	3.1	0.11	8.4	21
Multiple UDP 4,2 <sup>5</sup>	249 (196-318)	0.119 (0.074-0.22)	3.0	0.10	8.4	16
Multiple UDP 3,3 <sup>6</sup>	248 (191-326)	0.098 (0.058-0.227)	3.9	0.129	10.2	16
Current 401* (LD <sub>50</sub> =50)	51 (46-54)	0.04 (0.02-0.05)	2.5	0.01	25	15

<sup>1</sup> Only includes the 769 out of 1000 runs that converged

<sup>3</sup> Only includes the 1272 runs that converged

<sup>5</sup> Only includes the 542 out of 1000 runs that converged

\* Five at 20, 50, and 100 mg/kg, and 130 out of 1000 runs converged

<sup>2</sup> Only includes the 1147 runs that converged

<sup>4</sup> Only includes the 513 out of 1000 runs that converged

<sup>6</sup> Only includes the 507 out of 1000 runs that converged

**Table 2A**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Hybrid Method)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor (95%/5%)	Difference High-Median	Slope	
		TRUE SIGMA 0.5		Slope 2		
BEST CASE <sup>1</sup>	250 (146-427)	0.507(0.375-0.769)	2.05	0.262	2	30+
<b>10 at LD13, 45, &amp; 70<sup>2</sup></b>	<b>257 (155-418)</b>	<b>0.44 (0.13-0.72)</b>	<b>5.5</b>	<b>0.28</b>	<b>2.3</b>	<b>30</b>
7 at LD13, 45, & 70 <sup>3</sup>	265 (141-447)	0.41 (0.064-0.75)	11.7	0.34	2.44	21
5 at LD13, 45, & 70 <sup>4</sup>	255 (136-477)	0.41 (0.040-0.81)	11.7	0.40	2.44	15
10 at LD13 & 70; & 5 at 45 <sup>5</sup>	265 (150-482)	0.44 (0.12-0.73)	6	0.29	2.3	25
10 at LD13 & 45 <sup>6</sup>	216 (89.2-402)	0.24 (0.026-0.778)	29	0.53	4.1	20
<b>10 at LD13 &amp; 70<sup>7</sup></b>	<b>268 (143-488)</b>	<b>0.45 (0.30-0.77)</b>	<b>2.6</b>	<b>0.32</b>	<b>2.2</b>	<b>20</b>
10 at LD13, 40, & 87 <sup>8</sup>	228 (122-425)	0.369 (0.048-0.711)	32.5	0.342	2.7	30
<b>10 at LD13, 40, &amp; 87<sup>9</sup></b>	<b>228 (131-423)</b>	<b>0.39 (0.15-0.71)</b>	<b>4.8</b>	<b>0.32</b>	<b>2.6</b>	<b>30</b>
<b>7 at LD13, 40, &amp; 87<sup>10</sup></b>	<b>230 (114-453)</b>	<b>0.37 (0.19-0.74)</b>	<b>3.9</b>	<b>0.37</b>	<b>2.7</b>	<b>21</b>
<b>5 at LD13, 40, &amp; 87<sup>11</sup></b>	<b>230 (110-471)</b>	<b>0.36 (0.20-0.76)</b>	<b>3.8</b>	<b>0.40</b>	<b>2.8</b>	<b>15</b>
<b>10 at LD13 &amp; 87; &amp; 5 at 40<sup>12</sup></b>	<b>231 (130-448)</b>	<b>0.41 (0.21-0.72)</b>	<b>3.4</b>	<b>0.31</b>	<b>2.4</b>	<b>25</b>
<b>10 atLD13 and LD87</b>	<b>245 (123-494)</b>	<b>0.58 (0.38-0.79)</b>	<b>2.1</b>	<b>0.21</b>	<b>1.72</b>	<b>20</b>

<sup>1</sup> Only includes the 783 out of 1000 runs that converged

<sup>3</sup> Includes all runs, however 63 did not converge

<sup>5</sup> Includes all runs, however 42 did not converge

<sup>7</sup> Only includes the 1727 runs that converged

<sup>9</sup> Includes all runs, however 93 did not converge

<sup>11</sup> Only includes the 1705 runs that converged

<sup>13</sup> Only includes the 1104 runs that converged

<sup>2</sup> Includes all runs, however 30 did not converge

<sup>4</sup> Includes all runs, however 85 did not converge

<sup>6</sup> Includes all 1000 runs, however 75 did not converge

<sup>8</sup> Includes all 1000 runs, however 11 did not converge

<sup>10</sup> Only includes the 1803 runs that converged

<sup>12</sup> Only includes the 1753 runs that converged

**Table 2B**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Multiple UDP)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor (95%/5%)	Difference High-Median	Slope	
(2000 simulations each unless specified in the footnote)						
TRUE SIGMA 0.5					Slope 2	
BEST CASE <sup>1</sup>	250 (146-427)	0.507(0.375-0.769)	2.05	0.262	2	30+
Multiple UDP 6, 3 <sup>2</sup>	247 (138-444)	0.42 (0.18-0.74)	4.1	0.32	2.38	30
Multiple UDP 5, 3 <sup>3</sup>	250 (138-455)	0.41 (0.15-0.75)	5	0.34	2.44	25
Multiple UDP 4,3	247 (131-469)	0.4 (0.147-0.761)	5.17	0.361	2.5	21
Multiple UDP 4,2	249 (131-470)	0.38 (0.083-0.82)	9.9	0.44	2.6	16
Multiple UDP 3,3	250 (129-490)	0.37 (0.011-0.75)	68	0.38	2.7	15
Current 401* (LD <sub>50</sub> =50)	51 (19-155)	0.41 (0.04-1.5)	37.5	1.09	2.4	15

<sup>1</sup> Only includes the 783 out of 1000 runs that converged

<sup>2</sup> Includes all runs, however 14 did not converge

<sup>3</sup> Includes all runs, however 22 did not converge

\*Five at 20, 50, and 100 mg/kg, and 1930 runs converged

**Table 3A**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Hybrid Method)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
TRUE SIGMA 1.25						
BEST CASE <sup>1</sup>	250 (65.4-955)	1.27 (0.938-1.92)	2.0	0.65	0.79	30+
10 at LD13, 45, & 70 <sup>2</sup>	237 (76-875)	1.06 (0.53-2.6)	4.9	1.54	0.94	30
7 at LD13, 45, & 70 <sup>3</sup>	226 (58-925)	1.0 (0.47-2.8)	5.9	1.8	1.0	21
5 at LD13, 45, & 70 <sup>4</sup>	242 (55-1103)	0.91 (0.36-3.0)	8.3	2.09	1.1	15
10 at LD13 & 70; & 5 at 45 <sup>5</sup>	243 (67-973)	1.1 (0.5-2.8)	3.4	1.7	0.9	25
10 at LD13 & 45 <sup>6</sup>	182 (36-998)	0.96 (0.2-3.37)	16.8	2.41	1.04	20
10 at LD13 & 70 <sup>7</sup>	244 (63-1060)	1.1 (0.53-2.6)	4.9	1.5	0.9	20
10 at LD13, 40, & 87 <sup>8</sup>	242 (80.8-762)	1.13 (0.63-2.21)	3.5	1.08	0.88	30
10 at LD13, 40, & 87	248 (75-760)	1.14 (0.63-2.2)	3.5	1.06	0.87	30
7 at LD13, 40, & 87 <sup>9</sup>	236 (67-925)	1.1 (0.57-2.6)	4.5	1.5	0.90	21
5 at LD13, 40, & 87 <sup>10</sup>	244 (55-1238)	1.0 (0.34-2.9)	2.9	1.9	1.0	15
10 at LD13 & 87; & 5 at 40 <sup>11</sup>	236 (75-833)	1.1 (0.61-2.4)	3.9	1.3	0.9	25
10 atLD13 and LD87 <sup>12</sup>	251 (27-2269)	1.7 (0.88-7.5)	8.5	5.8	0.64	20

<sup>1</sup> Only includes the 768 out of 1000 runs that converged

<sup>3</sup> Includes all runs, however 1 did not converge

<sup>5</sup> All runs converged

<sup>7</sup> Includes all runs, however 1 did not converge

<sup>9</sup> Includes all runs, however 2 did not converge

<sup>11</sup> Includes all runs, however 3 did not converge

<sup>2</sup> All runs converged

<sup>4</sup> Includes all runs, however 8 did not converge

<sup>6</sup> All 1000 runs converged

<sup>8</sup> All 1000 runs converged

<sup>10</sup> Includes all runs, however 8 did not converge

<sup>12</sup> Includes all runs, however 16 did not converge

**Table 3B**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Multiple UDP)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
(2000 simulations each unless specified in the footnote)						
<b>TRUE SIGMA 1.25</b>						<b>Slope 0.8</b>
BEST CASE <sup>1</sup>	250 (65.4-955)	1.27 (0.938-1.92)	2.0	0.65	0.79	30+
<b>Multiple UDP 6, 3<sup>2</sup></b>	<b>213 (54-1378)</b>	<b>1.1 (0.52-3.1)</b>	<b>6.0</b>	<b>2.0</b>	<b>0.9</b>	<b>30</b>
<b>Multiple UDP 5, 3</b>	<b>200 (50-1481)</b>	<b>1.0 (0.48-3.5)</b>	<b>7.3</b>	<b>2.5</b>	<b>1.0</b>	<b>20</b>
Multiple UDP 4,3	189 (41-1277)	1.05 (0.40-3.78)	9.4	2.73	0.95	21
Multiple UDP 4,2	209 (45-1051)	0.96 (0.4-3.9)	9.8	2.94	1.04	16
Multiple UDP 3,3	195 (43-1239)	0.93 (0.34-4.47)	13	3.54	1.07	16
Current 401* (LD <sub>50</sub> =50)	51 (7.4-846)	0.63 (-14- 15)	2.5	14.37	1.6	15

<sup>1</sup> Only includes the 768 out of 1000 runs that converged  
\* Five at 20, 50, and 100 mg/kg, and all runs converged

<sup>2</sup> Includes 11 runs where sigma was <0, that were set to high values

**Table 4A**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Hybrid Method)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
TRUE SIGMA 2.00						Slope 0.5
BEST CASE <sup>1</sup>	250 (5.6-11078)	1.92 (0.52-3.08)	5.9	1.16	0.52	30+
10 at LD13, 45, & 70 <sup>2</sup>	233 (29-2187)	1.6 (0.73-8.3)	11.37	6.7	0.625	30
7 at LD13, 45, & 70 <sup>3</sup>	217 (21-2544)	1.5 (0.6-27)	45	25.5	0.67	21
5 at LD13, 45, & 70 <sup>4</sup>	229 (20-2843)	1.3 (0.5->5.5)	>11	>4.2	0.77	15
10 at LD13 & 70; & 5 at 45 <sup>5</sup>	239 (27-2438)	1.5 (0.74-7.7)	10.4	6.2	0.67	25
10 at LD13 & 45 <sup>6</sup>	164 (17.2-2961)	1.27 (0.09-5.3)	58.4	4.04	0.79	20
10 at LD13 & 70 <sup>7</sup>	240 (20-3017)	1.6 (0.73-12.0)	16.4	10.4	0.625	20
<b>10 at LD13, 40, &amp; 87<sup>8</sup></b>	<b>234 (34.7-2056)</b>	<b>1.67 (0.88-5.14)</b>	<b>5.8</b>	<b>3.47</b>	<b>0.6</b>	<b>30</b>
<b>10 at LD13, 40, &amp; 87</b>	<b>236 (32-2048)</b>	<b>1.7 (0.86-6.9)</b>	<b>8.0</b>	<b>5.2</b>	<b>0.58</b>	<b>30</b>
7 at LD13, 40, & 87 <sup>9</sup>	242 (26-3011)	1.6 (0.77-13)	16.8	11.4	0.625	21
5 at LD13, 40, & 87 <sup>10</sup>	229 (19-4039)	1.6 (0.68-23)	33.8	21.4	0.625	15
<b>10 at LD13 &amp; 87; &amp; 5 at 40<sup>11</sup></b>	<b>238 (30-1806)</b>	<b>1.7 (0.88-6.2)</b>	<b>7.0</b>	<b>4.5</b>	<b>0.58</b>	<b>25</b>
<b>10 atLD13 and LD87<sup>12</sup></b>	<b>251 (27-2269)</b>	<b>1.7 (0.88-7.5)</b>	<b>8.5</b>	<b>5.8</b>	<b>0.58</b>	<b>20</b>

<sup>1</sup> Includes all 1000 runs, however 228 did not converge

<sup>3</sup> Includes 76 runs where sigma was <0, that were set to high values

<sup>5</sup> Includes 40 runs where sigma was <0, that were set to high values

<sup>7</sup> Includes 67 runs where sigma was <0, that were set to high values

<sup>9</sup> Includes 61 runs where sigma was <0, that were set to high values

<sup>11</sup> Includes 24 runs where sigma was <0, that were set to high values

<sup>2</sup> Includes 41 runs where sigma was <0, that were set to high values

<sup>4</sup> Includes 101 runs where sigma was <0, that were set to high values

<sup>6</sup> Includes (1K) 48 runs where sigma was <0, that were set to high values

<sup>8</sup> Includes (1K) 12 runs where sigma was <0, that were set to high values

<sup>10</sup> Includes 81 runs where sigma was <0, that were set to high values

<sup>12</sup> Includes 41 runs where sigma was <0, that were set to high values

**Table 4B**  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE**  
**LD<sub>50</sub>, CI and Slope (Multiple UDP)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
(2000 simulations each unless specified in the footnote)						
<b>TRUE SIGMA 2.00</b>				<b>Slope 0.5</b>		
BEST CASE <sup>1</sup>	250 (5.6-11078)	1.92 (0.52-3.08)	5.9	1.16	0.52	30+
Multiple UDP 6, 3 <sup>2</sup>	162 (19-5635)	1.6 (0.73-27)	37	25.4	0.625	30
Multiple UDP 5, 3 <sup>3</sup>	156 (16-4947)	1.5 (0.69-34)	49.2	32.5	0.67	20
Multiple UDP 4,3	158 (12-6186)	1.6 (0.6-1000 <sup>+</sup> )			0.625	21
Multiple UDP 4,2		1.33 (0.54-1000 <sup>+</sup> )			0.75	16
Multiple UDP 3,3		1.41 (0.5-1000 <sup>+</sup> )			0.71	15
Current 401 (LD <sub>50</sub> =50)						

<sup>1</sup> Includes all runs, however 228 did not converge

<sup>2</sup> Includes 77 runs where sigma was <0, that were set to high values

<sup>3</sup> Includes 11 runs where sigma was <0, that were set to high values

<sup>+</sup> Negative values set to 1000

**Table 5**

**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE  
LD<sub>50</sub>, CI and Slope (Multiple UDP)**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
		TRUE SIGMA 0.25		Slope 4		
Multiple UDP 6, 3 <sup>1</sup>	250 (183-342)	0.2 (0.0059-0.38)	63.0	0.18	5.0	30
Multiple UDP 5, 3 <sup>2</sup>	250 (183-345)	0.2 (0.0033-0.38)	115.1	0.18	5.0	20

<sup>1</sup> Includes all runs, however 110 did not converge

<sup>2</sup> Includes all runs, however 205 did not converge

Table 6

**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE  
LD<sub>50</sub>, CI and Slope  
Comparison of Acceptable Methods**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
		MEDIAN (range)	Factor 95%/5%	Difference High-Median	Slope	
(2000 simulations each unless specified in the footnote)						
<b>TRUE SIGMA 0.12</b>					<b>Slope 8.3</b>	
BEST CASE <sup>1</sup>	250 (199-314)	0.12 (0.09-0.185)	2.0	0.06	8.3	30+
<b>10 at LD13, 45, &amp; 70<sup>2</sup></b>	<b>250 (200-291)</b>	<b>0.13 (0.036-0.21)</b>	<b>5.8</b>	<b>0.08</b>	<b>7.6</b>	<b>30</b>
10 at LD13, 45, & 70 <sup>2</sup>	250 (208-291)	0.115 (0.036-0.205)	5.6	0.17	8.7	30
7 at LD13, 45, & 70 <sup>3</sup>	250 (205-297)	0.15 (0.032-0.22)	6.2	0.07	6.7	21
<b>5 at LD13, 45, &amp; 70<sup>4</sup></b>	<b>250 (199-304)</b>	<b>0.12 (0.036-0.23)</b>	<b>6.4</b>	<b>0.11</b>	<b>8.3</b>	<b>15</b>
10 at LD13 & 70; & 5 at 45 <sup>5</sup>	250 (192-304)	0.12 (0.036-0.21)	5.8	0.09	8.3	25
10 at LD13 & 45 <sup>6</sup>	250 (209-293)	0.129 (0.036-0.23)	6.3	0.10	7.8	20
Multiple UDP 6, 3 <sup>7</sup>	251 (207-312)	0.1 (0.035-0.21)	6.0	0.10	10	30
Multiple UDP 5, 3 <sup>8</sup>	250 (202-305)	0.12 (0.032-0.20)	6.25	0.08	8.3	25
Multiple UDP 4,3 <sup>9</sup>	247 (197-318)	0.119 (0.074-0.23)	3.1	0.11	8.4	21
<b>Multiple UDP 4,2<sup>10</sup></b>	<b>249 (196-318)</b>	<b>0.119 (0.074-0.22)</b>	<b>3.0</b>	<b>0.10</b>	<b>8.4</b>	<b>16</b>

<sup>1</sup> Only includes the 769 out of 1000 runs that converged

<sup>3</sup> Only includes the 1047 runs that converged

<sup>5</sup> Only includes the 929 runs that converged

<sup>7</sup> Only includes the 1147 runs that converged

<sup>9</sup> Only includes the 513 runs that converged

<sup>2</sup> Only includes the 1154 runs that converged

<sup>4</sup> Only includes the 884 runs that converged

<sup>6</sup> Only includes the 575 out of 1000 runs that converged

<sup>8</sup> Only includes the 1272 runs that converged

<sup>10</sup> Only includes the 542 runs that converged

Table 7  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE  
LD<sub>50</sub>, CI and Slope**  
**Comparison of Acceptable Methods**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor (95%/5%)	Difference High-Median	Slope	
		TRUE SIGMA 0.5			Slope 2	
BEST CASE <sup>1</sup>	250 (146-427)	0.507(0.375-0.769)	2.05	0.262	2	30+
<b>10 at LD13, 45, &amp; 70<sup>2</sup></b>	<b>257 (155-418)</b>	<b>0.44 (0.13-0.72)</b>	<b>5.5</b>	<b>0.28</b>	<b>2.3</b>	<b>30</b>
<b>10 at LD13 &amp; 70<sup>3</sup></b>	<b>268 (143-488)</b>	<b>0.45 (0.30-0.77)</b>	<b>2.6</b>	<b>0.32</b>	<b>2.2</b>	<b>20</b>
10 at LD13, 40, & 87 <sup>4</sup>	228 (131-423)	0.39 (0.15-0.71)	4.8	0.32	2.6	30
7 at LD13, 40, & 87 <sup>5</sup>	230 (114-453)	0.37 (0.19-0.74)	3.9	0.37	2.7	21
<b>5 at LD13, 40, &amp; 87<sup>6</sup></b>	<b>230 (110-471)</b>	<b>0.36 (0.20-0.76)</b>	<b>3.8</b>	<b>0.40</b>	<b>2.8</b>	<b>15</b>
10 at LD13 & 87; & 5 at 40 <sup>7</sup>	231 (130-448)	0.41 (0.21-0.72)	3.4	0.31	2.4	25
<b>10 atLD13 and LD87</b>	<b>245 (123-494)</b>	<b>0.58 (0.38-0.79)</b>	<b>2.1</b>	<b>0.21</b>	<b>1.72</b>	<b>20</b>
Multiple UDP 6, 3 <sup>8</sup>	247 (138-444)	0.42 (0.18-0.74)	4.1	`0.32	2.38	30
Multiple UDP 5, 3 <sup>9</sup>	250 (138-455)	0.41 (0.15-0.75)	5	0.34	2.44	25
Multiple UDP 4,3	247 (131-469)	0.4 (0.147-0.761)	5.17	0.361	2.5	21

<sup>1</sup> Only includes the 783 out of 1000 runs that converged

<sup>3</sup> Only includes the 1727 runs that converged

<sup>5</sup> Only includes the 1803 runs that converged

<sup>7</sup> Only includes the 1753 runs that converged

<sup>9</sup> Includes all runs, however 22 did not converge

<sup>2</sup> Includes all runs, however 30 did not converge

<sup>4</sup> Includes all runs, however 93 did not converge

<sup>6</sup> Only includes the 1705 runs that converged

<sup>8</sup> Includes all runs, however 14 did not converge

Table 8  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE  
LD<sub>50</sub>, CI and Slope**  
**Comparison of Acceptable Methods**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
TRUE SIGMA 1.25						Slope 0.8
BEST CASE <sup>1</sup>	250 (65.4-955)	1.27 (0.938-1.92)	2.0	0.65	0.79	30+
10 at LD13, 45, & 70 <sup>2</sup>	237 (76-875)	1.06 (0.53-2.6)	4.9	1.54	0.94	30
7 at LD13, 45, & 70 <sup>3</sup>	226 (58-925)	1.0 (0.47-2.8)	5.9	1.8	1.0	21
10 at LD13 & 70; & 5 at 45 <sup>4</sup>	243 (67-973)	1.1 (0.5-2.8)	3.4	1.7	0.9	25
10 at LD13 & 70 <sup>5</sup>	244 (63-1060)	1.1 (0.53-2.6)	4.9	1.5	0.9	20
10 at LD13, 40, & 87 <sup>6</sup>	242 (80.8-762)	1.13 (0.63-2.21)	3.5	1.08	0.88	30
10 at LD13, 40, & 87	248 (75-760)	1.14 (0.63-2.2)	3.5	1.06	0.87	30
10 at LD13 & 87; & 5 at 40 <sup>7</sup>	236 (75-833)	1.1 (0.61-2.4)	3.9	1.3	0.9	25
Multiple UDP 6, 3 <sup>8</sup>	213 (54-1378)	1.1 (0.52-3.1)	6.0	2.0	0.9	30
Multiple UDP 5, 3	200 (50-1481)	1.0 (0.48-3.5)	7.3	2.5	1.0	20

<sup>1</sup> Only includes the 768 out of 1000 runs that converged

<sup>3</sup> Includes all runs, however 1 did not converge

<sup>5</sup> Includes all runs, however 1 did not converge

<sup>7</sup> Includes all runs, however 3 did not converge

<sup>2</sup> All runs converged

<sup>4</sup> All runs converged

<sup>6</sup> All runs converged

<sup>8</sup> Includes 11 runs where sigma was <0, that were set to high values

Table 9  
**COMPARISON OF VARIOUS SUPPLEMENTAL PROCEDURES TO DETERMINE  
LD<sub>50</sub>, CI and Slope**  
**Comparison of Acceptable Methods**

METHOD	ESTMATED LD <sub>50</sub> (range)	ESTIMATED SIGMA				ANIMALS USED Median
(2000 simulations each unless specified in the footnote)		MEDIAN (range)	Factor 95%/5%	Difference High-Mean	Slope	
		TRUE SIGMA 2.00		Slope 0.5		
BEST CASE <sup>1</sup>	250 (5.6-11078)	1.92 (0.52-3.08)	5.9	1.16	0.52	30+
<b>10 at LD13, 40, &amp; 87<sup>2</sup></b>	<b>234 (34.7-2056)</b>	<b>1.67 (0.88-5.14)</b>	<b>5.8</b>	<b>3.47</b>	<b>0.6</b>	<b>30</b>
10 at LD13, 40, & 87	236 (32-2048)	1.7 (0.86-6.9)	8.0	5.2	0.58	30
<b>10 at LD13 &amp; 87; &amp; 5 at 40<sup>3</sup></b>	<b>238 (30-1806)</b>	<b>1.7 (0.88-6.2)</b>	<b>7.0</b>	<b>4.5</b>	<b>0.58</b>	<b>25</b>
<b>10 atLD13 and LD87<sup>4</sup></b>	<b>251 (27-2269)</b>	<b>1.7 (0.88-7.5)</b>	<b>8.5</b>	<b>5.8</b>	<b>0.58</b>	<b>20</b>

<sup>1</sup> Includes all runs, however 228 did not converge

<sup>3</sup> Includes 24 runs where sigma was <0, that were set to high values

<sup>2</sup> Includes 12 runs where sigma was <0, that were set to high values

<sup>4</sup> Includes 41 runs where sigma was <0, that were set to high values